

REMARKS

Claims 1-9 are pending in the above application.

Claims 1, 8 and 9 are objected to because the Examiner believes that the radius of curvature of the fibers stated as "less than" or equal to the critical bending point radius is incorrect in view of the specification. Applicants respectfully agree with the Examiner's determination with respect to claim 1, but traverse the Examiner's determination with respect to claims 8 and 9. In claims 1, 8, and 9, it is necessary that the radius of curvature of the leading edge to be greater than equal to the critical bending radius of the reinforcement fiber. This ensures that the fiber will not shear when crimped around the leading edge of the connector.

Thus, in claim 1, the radius of curvature of the at least one reinforcement fiber must be greater than or equal to a critical bending point radius of the at least one reinforcement fiber. Claim 1 is amended to read as such as per the Examiner's suggestion.

Similarly, in claim 8, a reinforcement fiber must be selected having a critical bending point radius that is less than or equal to said the radius of curvature of the leading edge. This is correctly stated in claim 8 and contrary to the Examiner's determination.

Similarly, in claim 9, the critical bending point radius of the reinforcing fiber is less than or equal to said first radius of curvature of the leading edge. This is correctly stated in claim 9 and contrary to the Examiner's determination.

Further, claim 1 has been amended to describe that the crimp ring as being coupled without reducing the load bearing strength of the at least one reinforcement

Reconsideration of claims 1, 8 and 9 is thus respectfully requested.

Claims 1 and 4 stand rejected under 35 U.S.C. 102(b) as being anticipated by Wright (U.S. Patent No. 5,212,750). Applicants respectfully traverse the Examiner's rejection.

Wright describes a fiber optic harness assembly having reduced weight and bulk that comprises a plurality of optical fibers and loose tube protective buffers. The strength elements used to protect the optical fibers that are bundled with optical fibers and buffers within an outer jacket or jacket portion. The strength members are wrapped over the front or inner edge of a strain relief ring that is provided with a large radius and then further wrapped around the rear edge of a tubular projection and terminated into a backshell for transfer of tensile loads from the harness to the connector housing independently of the optical contacts. The ends of the strength members are fixed to a cylindrical outer clamping surface of the tubular projection using a retention band.

The retention band described in Wright thus prevents the reinforcing strand from slipping out of the assembly when the unit is not under tension. The retention band does not sustain loading of the reinforcement fibers. In Wright, the load is borne instead by the strain relief ring and the rearward tubular projection.

In the present invention, on the other hand, the crimp ring is designed for trapping the reinforcement fibers between two surfaces without reducing the load bearing strength of the fibers. Thus, the crimp ring in the present invention is not the same as the retention ring in Wright. As such, because Wright does not describe a crimp ring in the same manner as the present invention, Wright cannot anticipate claims 1 and 4. Reconsideration of claims 1 and 4 is respectfully requested.

Materials). Applicants respectfully traverse the Examiner's rejection.

~~Applicants first reiterate the arguments presented above that the retention ring~~
in Wright is not the equivalent of the crimp ring of the present invention. Further, Applicants respectfully submit that the Higdon et al. does not disclose a method for determining the critical bend radius as in the present invention.

Higdon et al. describes a method for calculating the elastic deflection of a beam or fiber when a load is applied by knowing the dimensions of the beam, the load and the elastic modulus of the material. In Wright, the elastic modulus is a characteristic describing the resistance of the material to deflection under an applied strain (i.e. the flexibility or ability to bend without breaking if you will). The elastic modulus is determined by plotting the stress strain curve for a material and taking a slope of the linear (elastic) portion of the curve. Thus, using Higdon et al., one can calculate what the stress will be on the fiber at a given load on the elastic portion of the stress strain curve.

To determine the minimum bend radius as claimed in the present invention, one must know the elastic modulus (linear portion of the stress strain curve) but must also know the breaking stress (tensile strength) of the material as well. Higdon et al., however, gives no information regarding determining the breaking stress of the fibers, wherein the load is sufficient to break the fiber or elongate the fiber to the point where it will not return to its original form. As Higdon et al. provides no information on how to determine the tensile strength, it does not teach all of the claim limitations of the present invention as described in claims 2, 3, and 5-9.

As neither Wright nor Higdon et al., alone or in combination, teaches the crimp ring or the method for determining the minimum bend radius as a function of the tensile strength of the reinforcement fibers, as required by MPEP 2142 and 2143, the

In view of the foregoing amendments and remarks, Applicants submit that ~~claims 1-9 are allowable. The Examiner is invited to telephone the Applicants~~ undersigned attorney at (614) 321-7162 if any unresolved matters remain.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please amend claim 1 as follows:

1. (Amended) A premise cable connector for aiding in coupling a premise cable to an adapter, wherein the premise cable has at least one optical fiber and at least one reinforcement fiber, the premise cable connector comprising:
a crimp ring; and
a base ring having a leading edge, wherein the at least one reinforcement fiber is secured over said leading edge and underneath said crimp ring such that the radius of curvature of the at least one reinforcement fiber is ~~[less]~~ greater than or equal to a critical bending point radius of the at least one reinforcement fiber, wherein said crimp ring is coupled without reducing the load bearing strength of the at least one reinforcement fiber.